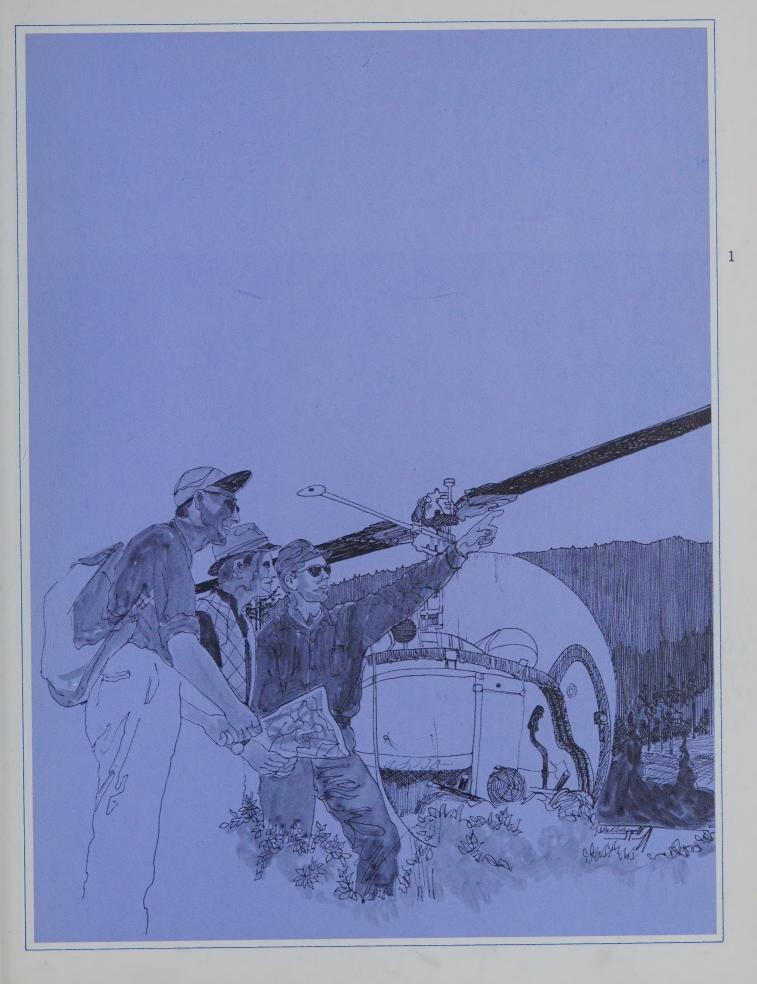
AR19

file

MORAINDA

NORANDA MINES LIMITED 46TH ANNUAL REPORT 1968

ACHAMAMA



DIRECTORS

John R. Bradfield*

Chairman, Noranda Mines Limited/Toronto

Hon. George B. Foster*

Senior Partner-Foster, Watt, Leggat, Colby,

Rioux & Malcolm/Montreal

Louis Hébert

President, Banque Canadienne Nationale/Montreal

William James

Partner-James, Buffam & Cooper/Toronto

L. G. Lumbers*

President, Noranda Manufacturing Ltd./Toronto

André Monast

Partner-St. Laurent, Monast, Desmeules & Walters/Quebec

D W Downitts

Vice-Chairman, Noranda Mines Limited/Toronto

Alfred Powis*

President, Noranda Mines Limited/Toronto

Hon. Jean Raymond Chairman, Alphonse Raymond Ltée./Montreal

W. S. Row*

Executive Vice-President, Noranda Mines Limited/Toronto

J. D. Simpson

Chairman, Placer Development Limited/Vancouver

W. P. Wilder*

President, Wood Gundy Securities Limited/Toronto

*Member of Executive Committee

HONORARY DIRECTORS

F. M. Connell

A. O. Dufresne

Jules R. Timmins

Leo. H. Timmins

ANNUAL MEETING

April 25th, 1969, 2:30 p.m., Royal York Hotel/Toronto

OFFICERS

John R. Bradfield

Chairman of the Board

R. V. Porritt

Vice-Chairman of the Board

Alfred Powis

President and Chief Executive Officer

W. S. Row

Executive Vice-President

E. K. Cork

Vice-President—Treasurer

R. G. Driver

Vice-President

Hon. George B. Foster

Vice-President

L. G. Lumbers

Vice-President

R. P. Riggin

Vice-President—Corporate Relations

D. E. G. Schmitt

Vice-President-Mines

A. H. Zimmerman

Vice-President—Comptroller

J. O. Hinds

Executive Assistant to the President

R. C. Ashenhurst

Secretary

TRANSFER AGENT AND REGISTRAR

Canada Permanent Trust Company/ Toronto, Vancouver, Calgary, Saskatoon, Winnipeg, Montreal, Saint John, N.B., Halifax, Charlottetown and St. John's, Nfld. The Chase Manhattan Bank/New York, N.Y.

GENERAL COUNSEL

Holden, Murdoch, Walton, Finlay, Robinson, Pepall & Harvey

English and French editions of this report may be obtained from the head office of the Company at 44 King Street West, Toronto, Ontario.

On peut se procurer des copies additionnelles de ce rapport, en anglais ou en français, en s'adressant au bureau-chef de la compagnie, au 44 ouest, rue King, Toronto, Ontario.

FINANCIAL SUMMARY	1968	1967	1966	1965	1964
			(in thousands)		
Operating revenue	\$426,328	\$372,650	\$287,604	\$237,011	\$201,468
Dividends and interest earned	17,159	14,374	10,415	10,291	7,286
Depreciation	15,527	13,118	13,911	15,295	15,044
Taxes	33,975	34,627	30,289	22,156	20,185
Net income	52,476	49,547	47,771	38,553	34,040
Working capital	133,630	107,894	97,981	91,821	80,266
Capital expenditures	57,719	46,883	40,940	20,738	18,007
Investments and advances	170,410	147,676	87,816	90,591	87,514
Long-term debt	223,662	84,989	9,359	10,497	12,141



DIRECTORS' REPORT TO THE SHAREHOLDERS

Earnings and Dividends

Earnings of \$52.5 million, equivalent to \$2.20 per share, again established a record. On December 14 the shares were split two for one, and per share financial results have been calculated on the new basis. For the first time the results of all significant operating subsidiaries in Canada and the United States have been consolidated, and 1967 results have been restated for comparison.

Earnings per share	1968	1967
From operations	\$1.57	\$1.40
From investments	.63	.67
	\$2.20	\$2.07

Dividends equivalent to 25ϕ per new share were paid for the first three quarters of the year, and $27\frac{1}{2}\phi$ per new share for the last quarter.

Slightly higher metal production and average prices contributed to a gain in net earnings from mining operations, and the loss incurred by Northwood Pulp was substantially reduced. Offsetting these factors to some extent were continued losses in the zinc die-casting operations, and materially reduced earnings for Canada Wire and Cable due to difficult market conditions. Higher exploration and research expenditures and increased interest expense also affected earnings.

Major Developments

An issue of \$85 million (U.S.) in Industrial Revenue Bonds was completed on December 30 to finance the construction of a 70,000 ton aluminum reduction plant at New Madrid, Missouri. Kaiser Aluminum Inc. has contracted to supply know-how and alumina; Kaiser Engineers Inc. has undertaken design and construction and work is under way on site. Electric power will be supplied from a nearby generating station to be operated by Associated Electric Cooperative, a local utility. First production of metal, to be used by your Company's expanding aluminum fabricating facilities, is expected by the end of 1970. Included in the project is an aluminum rod, wire and cable plant, at New Madrid, which is currently under construction and will come into operation this Spring.

On January 20, 1969, Noranda offered to acquire shares of British Columbia Forest Products Limited. Including

shares purchased under the offer and on the market over several years, your Company now owns 1,074,699 shares, 29 % of the total outstanding. The average cost is \$28.04, a total investment of \$30.1 million which includes the value of 257,623 treasury shares of Noranda issued in 1969 as part consideration for the purchase. The Mead Corporation of Dayton, Ohio, also owns directly or indirectly the same number of B.C. Forest Products shares at an equal cost. Noranda and Mead have assigned voting rights on their controlling interest in B.C. Forest Products to Northwood Pulp, which they jointly own, and Noranda's proportionate share of the earnings of B.C. Forest Products will be reflected in financial statements for 1969. Northwood Pulp's operations are near B.C. Forest Products' largely undeveloped forest resources in the northern Interior of British Columbia, and there could be mutual benefits from a closer association between the two companies.

Early in 1969 Noranda purchased the remainder of the \$27.5 million of third mortgage income bonds of Brenda Mines Ltd. with common shares attached. Noranda now owns 2,090,900 shares of Brenda, which is about half the total to be outstanding. Brenda will obtain from customers and from its banker the balance of the \$60 million needed to put its mine into production. While progress has been hampered by sporadic labour disturbances, the mine and concentrator should be operating in the Autumn of 1969.

Tune-up at the Central Canada Potash project should commence this Summer. The total capital cost is now estimated at \$86 million and design capacity is 1,500,000 tons of product per year. The twin shafts have been completed to the ore horizon, and joined, and development of the orebody is proceeding. Construction of surface facilities has been delayed by a series of brief strikes and slow-downs, which were mainly union jurisdictional disputes. As previously reported, Central Farmers Fertilizer Company of Chicago has the right to acquire 49% of Central Canada Potash. Central Farmers is owned by 20 large wholesale cooperatives in the United States and Canada and is an important producer and distributor of fertilizers.

Financial Condition

Capital expenditures and investments by Noranda and consolidated subsidiaries totalled \$80 million, largely for the Central Canada Potash project and Brenda Mines. These outlays were more than offset by retained cash flow from operations of \$49 million and the increase in long-

term debt of \$48 million including a \$30 million issue of long-term debentures sold in September. Working capital rose substantially, to \$134 million. In addition, the 25 year lease obligation for the aluminum smelter at New Madrid, Missouri, has been shown on the balance sheet as long-term debt of \$85 million (U.S.). The corresponding assets have also been recorded on the balance sheet, and are largely liquid securities held in the construction fund.

Outlook

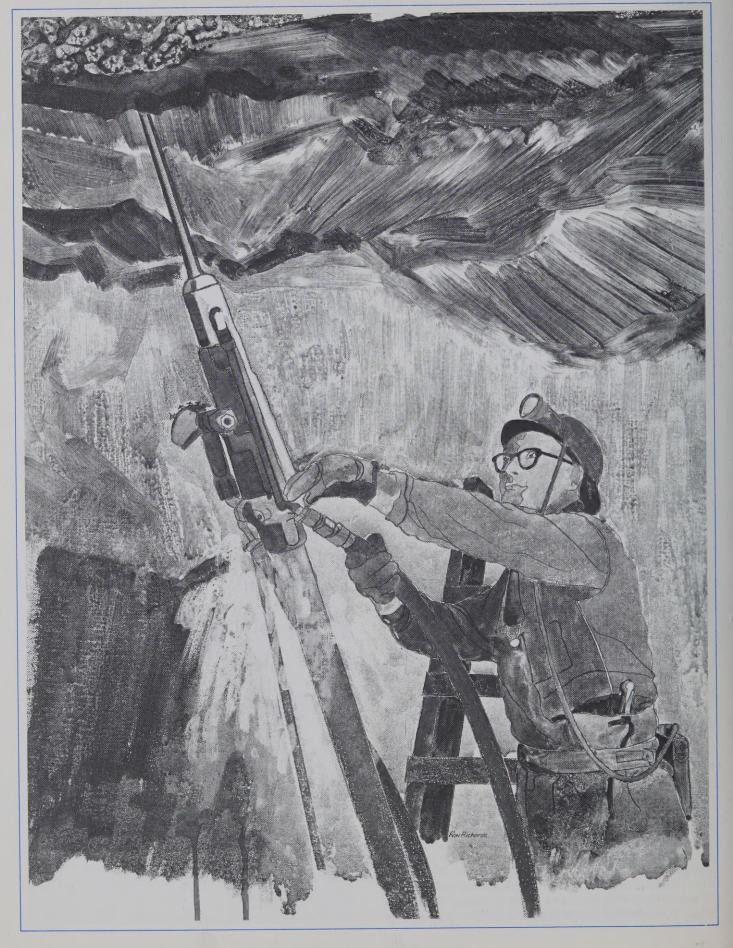
Noranda's financial condition remains strong, and present commitments for investments and capital expenditures in 1969 can be met from internal resources.

Demand for most of Noranda's mine products is good and prices are firm. Operations at the zinc die-casting plants and the pulp mill have been improving steadily, and there are indications of better conditions in the pulp and wire and cable markets. As far as can be seen at present, therefore, the outlook for 1969 appears favourable.

On behalf of the Board

Toronto, Ontario, February 28, 1969





METAL MARKETS

Copper

The eight-month U.S. copper strike terminated in late March with loss of about 1,000,000 tons of copper, and consumers imported refined copper to supplement domestic scrap. Outside the U.S.A., production in 1968 reached record levels, despite fuel shortages in Zambia and drought in Chile, so that Free World production was less than 1% below the 1965 record.

The anticipated build-up of copper stocks, following termination of the U.S. strikes, did not materialize when overseas and North American consumers became active buyers in the second half. U.S. producers' prices were increased immediately following the strike from $38 \not\in$ to $42 \not\in$ U.S. per pound, and again in January 1969 to $44 \not\in$. In May, the overseas price basis was changed from the London Metal Exchange "three months" to the "prompt" quotation. During the year, the latter ranged from $87 \not\in$ U.S. per pound in March to a low of $46 \not\in$ in August, and was $53.8 \not\in$ at year end. The Canadian domestic price was reduced in July from $51 \not\in$ C.F. to $45 \not\in$ and increased in January 1969 to $48.5 \not\in$.

In the 1966 Annual Report it was stated that "Canadian scrap needed by domestic consumers has been exported at prices far above the domestic price of virgin copper. When this happens, the mines whose concentrates are smelted in Canada must replace at the domestic price the metal exported as scrap. Mines which export their concentrate are not required to make any such sacrifice. The result of Government policy therefore is to encourage the export of concentrates and scrap and discourage smelting and fabricating in Canada." This situation still prevails.

Zinc

Free World consumption in 1968 increased 10% to a new high of some 4,100,000 tons, led by a strong recovery in the United States and Western Europe, and further growth in Japan.

With substantial new smelter capacity available in Europe, Japan and Australia, production continued below capacity at 4,000,000 tons and in balance with mine production. Metal stocks were reduced substantially during the fourth quarter.

Prices, unchanged during 1968, were increased by $\frac{1}{2}\phi$ per pound in the U.S.A. and Canada in January 1969 to 14ϕ U.S. and 14ϕ C.F., respectively. The overseas price continues at the equivalent of 12.25ϕ U.S.

Lead

Free World production and consumption exceeded the 1967 record levels and U.S. consumption increased 5% to 1,320,000 tons. The U.S. price was reduced from $14 \, \varphi$ per pound to $13 \, \varphi$ in May, and to $12.5 \, \varphi$ in July. In October the price recovered to $13 \, \varphi$ and was increased again in January to $14 \, \varphi$. The Canadian price reacted similarly and is currently $14.5 \, \varphi$ C.F. per pound. The overseas price ranged from the equivalent of $9.8 \, \varphi$ to $11.7 \, \varphi$ U.S. per pound.

Molybdenum

Despite some strike losses, mine production of 130 million pounds exceeded consumption by approximately 10%. Planned new mine production should provide ample capacity for consumption growth which has resumed its historical 7% average annual rate.

Silver

Free World industrial consumption exceeded new production by some 110 million ounces, and most of the deficit was supplied from U.S. Treasury stocks now estimated at 240 million ounces. Under strong speculative and currency hedge demand, prices rose to a record \$2.565 U.S. per troy ounce in June and then declined below \$2.

Gold

During the currency and resultant gold crisis last March, the Central Banks abandoned sales from official gold stocks at \$35 U.S. to the London market. The London price thereafter responded to supply and demand and, with South Africa withholding supplies, has risen to the current level of \$42.50 U.S. per ounce. Noranda's beneficial interest in the 1968 gold production from its own mines and those of subsidiary and affiliated companies was some 403,000 ounces.

REVIEW OF OPERATIONS MINING AND METALLURGICAL

Consolidated Companies

HORNE MINE

The mine produced 918,000 tons of ore averaging 1.92% copper and 0.162 oz. of gold per ton. Reserves of sulphide and fluxing ores were reduced by 605,000 and 211,000 tons respectively.

Ore reserves at year end were:

	Tons	Copper	Gold
		%	Oz./Ton
Sulphide Ore	2,671,000	2.54	0.19
Horne Fluxing Ore	105,000		0.26
Joliet Fluxing Ore	500,000	1.21	

Of the ore mined, 774,000 tons were treated in the concentrator, with production of 119,000 tons of copper concentrate for smelting and 188,000 tons of pyrite concentrate for sale to chemical plants.

GECO MINE

Ore mined and treated was a record 1,495,370 tons and averaged 4,100 tons per day containing 2.18% copper, 4.67% zinc and 2.2 ozs. of silver per ton. Copper, zinc and lead concentrates produced amounted to 114,300 tons, 100,620 tons and 2,520 tons respectively.

The estimate of proven ore in reserve was increased by 1,050,000 tons to 27,769,000 tons at year end, averaging 2.03% copper, 4.92% zinc and 2.11 ozs. of silver per ton.

The No. 4 shaft orepass system, crusher, hoists and conveyor systems handled 42% of the production from the mine.

ORE PRODUCTION

	но	RNE MI	NE		GECO	MINE	
		Metal Content		Metal Content			tent
	Ore (1)	Copper	Gold	Ore	Copper	Zinc	Silver
	(tons)	(tons)	$\left(\text{ounces}\right)$	(tons)	(tons)	(tons)	(ounces)
1968	919,300	18,820	121,160	1,495,400	30,860	54,750	2,452,400
1967	978,700	20,020	132,840	1,460,800	27,810	40,500	2,193,900
1966	1,094,600	23,070	171,140	1,459,600	26,770	46,120	2,203,500
1965	1,147,700	24,280	177,980	1,326,400	24,790	42,880	2,214,600
1964	1,250,300	25,690	205,100	1,299,300	25,620	56,640	2,468,800
		(1) Inc	cludes dir	ect smelting	gore		

NORANDA SMELTER

Increased receipts of Geco concentrates resulted in a record smelter production of 221,500 tons of anode copper. The pilot plant to test the new Noranda smelting process has been in operation since May, and is now regularly producing blister copper and slag from concentrates, in one vessel. Further work is directed towards improving performance.

	Material S	Material Smelted	
	Noranda (1)	Custom	Anodes Produced
	(tons)	(tons)	(tons)
1968	822,900	790,900	221,500
1967	793,800	800,100	212,300
1966	968,700	679,300	184,580
1965	1,002,300	722,900	183,420
1964	964,500	671,000	174,760
	(1) Ores, co	ncentrates and	flux

AUNOR GOLD MINES

Some 269,120 tons of ore averaging 0.36 oz. of gold per ton were mined and treated for a recovery of 92,680 ounces. The marked improvement over 1967 was mainly due to effective utilization of the hydraulic system for placing classified mill tailings as backfill in stopes, the cementing of fill for stope floors and investment in new stoping equipment.

A major program to prepare new stopes below the 2900 level was continued. The proportion of ore hoisted in the No. 3 internal shaft, which was acquired from Delnite in 1964, increased from 35% to 75% and will continue to increase during 1969.

Ore reserves at year end were slightly higher at 865,000 tons averaging 0.32 oz. of gold per ton.

BRYNNOR MINES

Kennedy Lake Division

Some 233,000 tons of ore, stockpiled when the open-pit operation was completed in 1967, were treated to produce 142,600 tons of magnetite concentrate. Shipments to Japan from stockpile and production were 181,500 tons. At the year end, 34,000 tons of concentrate remained on the stockpile for shipment in 1969.

Much of the mining equipment was transferred for use at other Noranda Group operations. The value of assets transferred or sold in 1968 was \$813,000. It is expected that disposal of the plant will be completed in 1969.

Boss Mountain Division

Ore extraction was 497,800 tons averaging .26 % molybdenum. The milling rate was increased gradually and averaged 1,410 tons per day during the last 6 months. Production was 2,404,000 pounds of molybdenum in concentrate for a recovery of 92.7%.

Proven ore reserves above the adit level showed a net increase of 525,000 tons to a total of 3,000,000 tons, with the grade maintained at 0.28 % molybdenum.

Preparations were completed for sinking an internal shaft 850 feet below the adit level. The cost of the project is estimated at \$1,450,000 of which \$353,000 were spent for equipment and preparation work. Sinking began in January 1969.

CANADIAN COPPER REFINERS

At 351,000 tons, the production of refined copper was 8.3% higher than the previous record output in 1967.

The major program undertaken in 1967 to replace inadequate production equipment and rearrange flow lines through the plant was nearing completion at year end.

Refined Metal Production

	Copper	Silver	Gold
	(Tons)	(Ounces)	(Ounces)
1968	351,000	13,084,000	435,000
1967	324,000	11,276,000	475,000
1966	285,000	10,051,000	527,000
1965	273,000	9,647,000	546,000
1964	270,000	8,873,000	571,000

GASPÉ COPPER MINES

Needle Mountain

The Needle Mountain mine produced 2,756,700 tons of ore averaging 1.12% copper, of which 1,461,900 tons came from the open pit. Waste stripping from the pit amounted to 772,000 tons.

Ore reserves decreased by 1,894,000 tons to 27,495,000 tons averaging 1.40% copper.

The concentrator treated 2,650,300 tons of ore and produced 100,380 tons of copper concentrate as well as molybdenum concentrate containing 360,800 pounds of molybdenum.

Copper Mountain

Production from this new mine and related facilities commenced late in January. Some 1,288,500 tons of ore averaging 0.73 % copper were produced and 4,941,000 tons of waste material were removed.

Ore reserves decreased by the tonnage mined to 29,753,000 tons averaging 0.71 % copper.

The concentrator treated 1,283,400 tons of ore and produced 26,210 tons of copper concentrate. Molybdenum concentrates produced contained 150,300 pounds of molybdenum.

Smelter

The smelter operation again achieved record anode production.

	Material	Material Smelted				
	Gaspé (1)	Custom	Anodes Produced			
	(tons)	(tons)	(tons)			
1968	228,600	107,000	61,100			
1967	200,800	97,800	54,500			
1966	191,700	75,100	46,980			
1965	182,600	60,400	42,650			
1964	194,600	51,400	43,320			
	(1) Concentrates and flux					

(1) Concentrates and mux.

HALLNOR MINES

Recovery of 50,520 ounces of gold resulted from mining and treating 132,530 tons of ore averaging 0.39 oz. per ton.

Ore reserves above the 28th level (4300') were 145,400 tons, about 53,600 tons lower than a year ago. Drifting on new lower levels from 4300 feet to 4900 feet below surface reached the expected new vein but more work is required to prove additional ore reserves.



The \$14 million Copper Mountain open-pit mining project reached production in January, 1968, after removal of 13 million tons of waste and low-grade material.

Unconsolidated Subsidiaries

BRUNSWICK MINING AND SMELTING

Brunwick's No. 12 underground mine produced 1,724,000 tons of ore averaging 8.56% zinc, 3.38% lead, 0.27% copper and 1.92 ounces of silver per ton. Some 221,000 tons of zinc concentrate, 119,500 tons of lead concentrate and 10,680 tons of copper concentrate were produced. Zinclead ore reserves were increased 8,737,000 tons and at year end were:

	Tons	Zinc	Lead	Silver
		-%	%	OZS.
Proven	29,954,000	8.67	3.43	2.23
Probable	30,812,000	9.08	3.57	2.57

Additionally there were 13,030,000 tons of copper ore averaging 1.14% copper and 0.98 ounces of silver per ton.

Brunswick's No. 6 open-pit mine produced 984,000 tons of ore averaging 5.66 % zinc, 2.47 % lead, 0.35 % copper and 1.53 ounces of silver per ton. Concentrates produced were

zinc-lead — 46,300 tons zinc — 51,800 tons lead — 38,800 tons copper — 2,260 tons

Ore reserves were increased 1,959,000 tons to 17,805,000 tons averaging 5.67% zinc, 2.36% lead, 0.37% copper and 1.85 ounces of silver per ton.

Production at Brunswick's subsidiary, East Coast Smelting and Chemical, improved substantially over 1967.

	1968	1967
	(Tons)	(Tons)
Concentrates processed	122,400	94,500
SHG Zinc produced	25,160	11,540
CG Lead produced	11,800	5,810
Sulphuric acid produced	109,500	79,830

Working conditions were improved markedly during the year. A program to construct additional essential facilities and to replace certain equipment in the lead refinery was well underway at year end.

EMPRESA MINERA de EL SETENTRION

The Nicaraguan gold operation mined and treated 120,200 tons of ore, slightly less than in 1967, but the average grade was unchanged at 0.54 oz. per ton. Proven ore reserves at 128,000 tons show a reduction of 63,000

tons but this is offset by increased tonnage in the category of probable ore.

Some outside exploration was carried out on a concession in northern Nicaragua and in Honduras and Costa Rica. A promising silver prospect is held for further investigation.

EMPRESA FLUORSPAR MINES

With high levels of steel production creating a strong demand for fluorspar, the Mexican subsidiary, Las Cuevas, enjoyed record ore production and shipments of 288,000 and 275,000 tons, respectively. Earnings increased accordingly.

The pressure on the mine for increased ore production resulted in a lower rate of forward ore development and reserves were reduced by 130,000 tons to 1,870,000 tons.

The \$1.00 preferred share issue of Empresa Fluorspar, of which 480,000 shares remained outstanding, was fully redeemed shortly after the year end.

To conform with Mexican Law, arrangements are being made to sell 51% of the shares of Las Cuevas to Mexican citizens for a total consideration of \$3,060,000 (U.S.).

CHILE CANADIAN MINES

Ore treated during 1968 amounted to 238,700 tons averaging 1.76% copper, with recovery of 5,380 tons of cement copper containing 3,500 tons of metal.

Ore developments were unfavourable and it appears that the reserves will be largely exhausted during 1969. An arrangement to treat government ore on a custom basis is being investigated. If feasible, this would delay closing the operation and provide an opportunity to salvage ore remnants otherwise uneconomic.

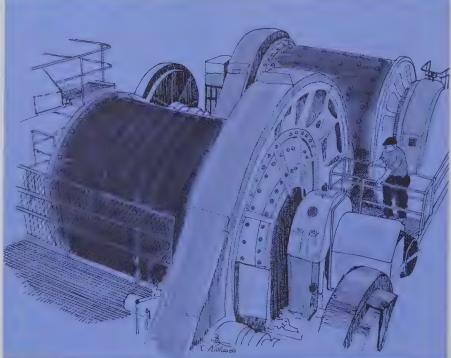
Associated Companies

KERR ADDISON MINES

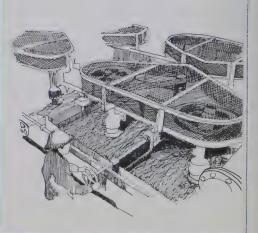
The mill treated an average of 1,395 tons per day grading 0.36 oz. of gold per ton, compared to 1,417 tons of 0.39 oz. per ton in 1967. Ore reserves are 3,250,000 tons averaging 0.46 oz. of gold per ton. A year earlier, reserves were estimated at 3,750,000 tons grading 0.45 oz. per ton.

Normetal Mines Limited, wholly-owned by Kerr Addison, processed an average of 991 tons per day in 1968 compared to 957 tons daily the previous year. The ore reserves are estimated at 1,200,000 tons grading 2.1% copper and





At Brenda Mines, carefully engineered, large-scale facilities are being provided to reduce operating costs.



6.2% zinc. Thirty-eight thousand tons of marginal ore were deleted from reserves.

Quemont Mines Limited, wholly-owned by Kerr Addison, treated an average of 1,173 tons per day, slightly lower than the 1967 average of 1,216 tons. Ore reserves are 590,000 tons averaging 0.9% copper, 2.2% zinc, 0.17 oz. of gold and 0.91 oz. of silver. Ore reserves decreased 81,000 tons as a result of the sealing and back filling of an area of deteriorating pillars.

Joutel Copper Mines Limited, approximately two-thirds owned by Kerr Addison, completed its first full year of production in 1968. An average of 662 tons per day was treated averaging 2.5% copper, as compared to 675 tons per day of 2.1% copper during the last five months of 1967. Ore reserves are estimated at 1,000,000 tons grading 2.5% copper, compared to 1,020,000 tons averaging 2.4% the previous year.

Agnew Lake Mines Limited, 80% owned by Kerr Addison, commenced preparation for ultimate production of uranium from its property near Espanola, Ontario. During 1968, permanent buildings were erected and equipment installed to service the shaft sinking and mine development program. At year end, the six-compartment production shaft had reached a depth of 1,400 feet and metallurgical test work was begun to provide data for process design and mill engineering. Lateral development and underground drilling will be done concurrently with shaft sinking during 1969.

Kerr Addison holds a 21.4% interest in the Icon Sullivan Joint Venture, which treated an average of 529 tons per day, containing 3.2% copper, from its property in Chibougamau. Ore reserves are estimated at 880,000 tons averaging 2.9% copper.

Kerr Addison, aggressively pursuing an extensive exploration program throughout Canada and the western United States, is diamond drilling on five properties with an additional three scheduled for early 1969.

BRENDA MINES

Brenda had proved a large low-grade orebody estimated at 176 million tons averaging 0.049% molybdenum and 0.183% copper on its property located some 10 miles west of Okanagan Lake in B.C.

Work toward bringing the mine to production began in November, 1967, under Noranda's management. The project involved preparations for a large open-pit mining operation and the design and construction of a concentrator to treat 24,000 tons per day, as well as related facili-

ties. The rugged terrain in the vicinity of the minesite involved unusual difficulty and expense, particularly with regard to water supply and provision for tailings disposal.

A primary consideration in the overall planning and design was that maximum efficiency and minimum operating costs were vital because of the very low grade of Brenda ore.

The cost of the project was estimated at \$60 million and the date of completion and start of operations, September 1, 1969.

Because of delay and disruption of schedules, resulting from strikes and union difficulties experienced by some of the contractors, completion will be some weeks late unless the lost time can be recovered. As currently indicated, the final cost will be close to the estimate.

ORCHAN MINES

A total of 694,820 tons of ore was treated in the mill; 269,080 tons from the Orchan mine, 98,040 tons from the subsidiary, Bell Allard Mines, and 327,700 tons of custom ore from the New Hosco mine. Production from the Bell Allard open pit commenced in April at a rate of approximately 11,000 tons per month.

Ore reserves were depleted by 151,000 tons to 2,923,000 tons averaging 11.3% zinc and 1.3% copper in the Orchan mine, and to 191,800 tons averaging 11.2% zinc and 0.9% copper at Bell Allard.

NEW HOSCO MINES

Although ownership control of the company changed hands during the year, production continued at the normal rate of 900 tons per day throughout the period, under management by Noranda.

The ore was treated in the Orchan concentrator on a toll basis.

PAMOUR PORCUPINE MINES

Gold production increased to 71,400 ounces due to the higher tonnage treated and improvement in average grade to 0.124 oz. per ton. The mill operated at an average rate of 1,706 tons per day.

Ore reserves of 1,600,700 tons were slightly lower at year end but of slightly higher grade.

Effective application of new underground ore haulage equipment resulted in an increase in productivity.





The examination of diamond drill core is a key step in the evaluation of mineral deposits.

The search for improved metallurgical processes and products, continuously underway at the Noranda Research Centre, resulted in the development of the new smelting process currently being tested at the Noranda Smelter.

CANADIAN ELECTROLYTIC ZINC

The plant operated for the early part of the year at curtailed production because of zinc market conditions. After failure to reach a new labour agreement with Steelworkers, the plant was shut down by a strike which lasted from April 13 to June 2, when operation at maximum capacity was resumed. Production for the year was 111,460 tons of slab zinc.

During the year C.E.Z. assumed the management of St. Lawrence Fertilizers in order to deal directly with the operating and financial difficulties of that company and to ensure a continuing and regular market for C.E.Z.'s production of sulphuric acid.

Operating results of General Smelting, a wholly-owned subsidiary of C.E.Z., were marred by a strike which lasted from September 7 to December 7. The effects of this strike may extend into 1969 because of the time required to recapture sources of raw materials and markets for finished products which were lost during the strike. Production of a die-casting alloy made from C.E.Z. Special High Grade Zinc was begun during the year.

Other Important Interests

PLACER DEVELOPMENT

Placer's estimated 1968 earnings of \$1.30 per share were 93ϕ less than in 1967, reflecting lower dividends from Craigmont and an extended strike at Endako. Quarterly dividends of 20ϕ each were paid and the rate was increased to 25ϕ per share beginning with the quarterly dividend to be paid in March.

Placer has a 28% interest in a Nevada gold mine which last month began operation of a mill rated at 1,500 tons per day. The Philippine copper operation of Marcopper Mining Corporation, 40% owned by Placer, is expected to start late this year.

MATTAGAMI LAKE MINES

Net earnings of \$7,258,000 or \$1.10 per share were 34% less than 1967 earnings of \$10,926,000. First income tax amounting to \$2,250,000 was provided for in 1968.

Four dividends of 30ϕ per share each plus an extra of 30ϕ were paid.

Concentrate production at full capacity was interrupted by a two week strike in December. This reduced the tonnage treated to 1,363,705 or 3,726 tons per day as compared to 3,874 tons daily in 1967. Average ore grade was 9.8% zinc and 0.59% copper. The mill produced 230,830 tons of zinc concentrate and 29,832 tons of copper concentrate.

Zinc metal production was reduced by the 51-day strike at the Zinc plant.

Ore reserve tonnage is 18,388,870 and average grade is 10.0% zinc and 0.70% copper.

CRAIGMONT MINES

As expected, profits were sharply lower at \$3,998,000, reflecting both lower grade and tonnage of ore treated. The problems of initiating a new mining method using specialized equipment, while under pressure for maximum output, were approaching solution at year end.

Net profit was 79ϕ per share, dividends totalled \$1.00 per share, and working capital increased \$1,130,000.

EXPLORATION, DEVELOPMENT AND RESEARCH

Extensive mineral exploration was carried out in Canada, the United States and Australia at a cost of \$4.5 million. The program for 1969 is somewhat larger and will include a substantial effort in Newfoundland, where large concession areas have been acquired. Modest exploration programs are being undertaken in both Mexico and the Dominican Republic.

Scheduled geological, geophysical, geochemical and diamond drilling programs cover a number of very interesting base metal and uranium situations from coast to coast in Canada and the United States.

Noranda has a 25 % participation in a uranium exploration joint venture in New Mexico, in which Kerr Addison Mines has a 26% interest and management. At the end of January, 1969, 70 drill holes had been completed. Of 17 deep reconnaissance holes drilled at widely spaced intervals, four have encountered uranium mineralization of sufficient thickness and grade, at depths of approximately 2,600 feet, to warrant closer spaced drilling to determine whether ore bodies are present. A series of 41 relatively shallow holes, drilled at 200-foot centres on lines 400 feet apart, has indicated a potential ore zone at a depth of 900 feet, of 12-foot average thickness, containing 1.7 million tons with a grade, by radiometric logging, of 2.4 pounds U₃O₈ per ton. The zone is not completely delimited. Five of the remaining 12 holes have intersected thicknesses of the favourable host rocks, containing minor mineralization, and warrant follow-up drilling.



With development of the orebody underway and construction of surface facilities well advanced, it is anticipated that tune-up at the Central Canada Potash project should commence this summer.

Noranda Australia Limited is pursuing an intensive exploration program.

Noranda and Gaspé Copper share equally a 20% interest in Northern Oil Explorers Ltd. which is conducting a \$25 million, five-year oil and gas exploration program in Canada. At the end of 1968, N.O.E.L. had varying interests in 6,783,000 acres of lease and reservation lands.

Noranda is contributing \$906,000 for a 4.5% interest in Panarctic Oils Ltd. Locations of the first two wells were recently announced. One, on the Sabine Peninsula of Melville Island, will test to at least 10,000 feet and may spud as early as late March. The other, to at least 6,000 feet, will be on extreme northwest Melville, and will spud two or three weeks later.

Sinking of both shafts at the Saskatchewan potash mine is virtually complete, with only 83 feet to advance in one. The shaft stations were connected at the potash level and lower shaft construction is continuing. Water inflows are within the guarantee. Construction delays due to illegal walkouts by contractors' employees may delay initial production by as much as two months to August, 1969. Expenditures to the end of 1968 were \$69 million, of which \$26 million has been for shafts, \$34 million for surface plant, \$8 million for property and \$1 million for mine equipment and development.

The pilot plant for the Noranda continuous smelting process was started in late May. Current work is directed towards establishing production rates and methods for obtaining cleaner slags. Other research projects are for assessment of the commercial possibilities of electrocoating of aluminum, the development of improved zinc alloys, the heap leaching of low-grade copper ore, and a process for purification of molybdenite concentrate.

MANUFACTURING

Consolidated Companies

CANADA WIRE AND CABLE

Domestic sales declined in 1968 and earnings were affected by severe price competition, particularly in the aluminum conductor field. The expansion of the Manitoba plant was completed as was the construction of the new warehouse at Toronto. Capital expenditures during the year totalled \$3.9 million.

With the exception of New Zealand, foreign operations showed encouraging gains in sales and earnings, and prospects for the future are bright. Negotiations are almost complete for Canada Wire's participation in a Spanish wire and cable company.

Foreign subsidiary and associated companies had capital expenditures of \$3 million in 1968.

NORANDA COPPER MILLS

Sales and earnings were helped by the long strike of the U.S. domestic copper producers and the resulting increased demands on Canadian fabricators. Maintenance of the larger volume is anticipated. Manufacturing operations were satisfactory.

The new Fergus strip mill is now in commercial production and the Bellingham, Washington, tube redraw mill will be producing shortly. Capital expenditures during the year totalled \$5 million.

QUEBEC IRON FOUNDRIES

While consolidated sales were down slightly, profits increased. Atlantic Foundries came into full production and the efficiency of the Mont Joli and Noranda foundries improved. Ocean Foundries should benefit next year from the demands of the new mines coming into production in British Columbia. Research into manufacturing processes and new types of grinding media continues.

COULTER MANUFACTURING

Sales increased over those of 1967 and losses were reduced. However, severe price competition in the diecasting industry and start-up problems at the new Orangeville plant prevented the realization of the anticipated profit. Capital expenditures for the year were \$310,000.

NORCAST MANUFACTURING

Production costs in the Windsor and Detroit zinc diecasting plants were reduced substantially in the latter half of the year, but the group still sustained severe operating losses in 1968. Largely geared to supplying the automobile industry, Norcast finds itself facing increasing competition from other materials, low profit margins and insufficient sales volume. The group's reliance on its traditional markets is being reappraised.

The U.S. operations have been acquired by the Pacific Coast Company and the Canadian operations merged with Noranda Copper Mills.

GRANDVIEW INDUSTRIES

The consolidation of manufacturing facilities in 1967 improved operations in 1968 and further improvements are expected. Competition in the plastic pipe industry remains intense.

PACIFIC COAST

This Cleveland-based extruder of aluminum products completed its first full year as a wholly-owned member of the Noranda group of companies. Satisfactory sales growth was achieved and profits were maintained. Continued expansion is planned, in anticipation of the production of primary aluminum by Noranda Aluminum, Inc.

NORANDA ALUMINUM

During the year, engineering and know-how agreements were arranged and signed. Financing arrangements for the project were concluded on December 30th with the sale, by the City of New Madrid, Missouri, of \$85 million (U.S.) in Industrial Revenue Bonds.

The aluminum rod, wire and cable plant is nearing completion and is expected to be in production by May. Construction work on the reduction plant has commenced and production of metal is projected for late 1970. Staffs have been engaged, both in the U.S. and Canada, for the various phases of the project. The initial costs are in line with estimates.

Associated Companies

WIRE ROPE INDUSTRIES

This company, 40% owned, maintained satisfactory sales and earnings.

CANPLAS INDUSTRIES

Sales and earnings improved over those of last year and future prospects are encouraging.

FOREST PRODUCTS

Consolidated Companies

NORTHWOOD MILLS

Although this company's mills were closed by strike action until May, the substantial increase in lumber prices permitted an overall profitable operation for the year. Total production was 43 million board feet.

During the year the Greenwood mill was sold, leaving the company with operations at Princeton and Penticton. Plans are being developed for smallwood and related facilties at these two locations, which will enable a total production of approximately 125 million board feet per annum. The company's sales offices in Toronto and London, England, handle the full output of its own and Northwood Pulp's sawmills.

NORTHWOOD PULP (associated company)

The difficulties in operation experienced during the first full year of the pulp mill operations were brought under control in the early months of 1968. A capital expenditure program completed by mid-year succeeded in correcting equipment malfunctions and simultaneously increased the production capacity to over 700 tons per day of bleached kraft pulp. Product prices were well below economic levels throughout the industry, but are now improving and a worthwhile increase in mill net receipts is expected in 1969. The mill produced 200,000 tons of pulp in 1968, over half of which was consumed by The Mead Corporation, Noranda's partner in this venture. While Northwood Pulp suffered a loss after depreciation, there was a cash gain and little or no loss is expected in 1969.

The sawmill operations were most satisfactory in all three mills, which produced a total of 215 million board feet of lumber. Lumber prices are expected to be maintained in 1969. A fourth sawmill is being considered in order to utilize the smallwood volumes which the British Columbia Government is making available to sawmill operators.







- The Noranda Aluminum complex in Missouri, as it will appear when construction is completed.
- 2 There has been a strong demand for lumber in the construction industries.

CONSOLIDATED STATEMENT OF EARNINGS FOR THE YEAR ENDED DECEMBER 31, 1968 (with comparative figures for the year 1967)	1968	1967
	(in tho	usands)
Revenue: From metals, products and custom tolls. Dividends and interest earned (including \$207,000 dividends and	\$426,328	\$372,650
\$4,169,000 interest, from unconsolidated subsidiaries—Note 1(b)) Gain (loss) on sale of investments	17,159 (353) 443,134	14,374 3,012 390,036
Expense: Cost of metal production and products sold Depreciation Preproduction expenses written off Administration, selling and general expenses Municipal and sundry taxes Interest on long-term debt	293,293 14,379 1,148 28,434 3,167 6,814 347,235 95,899	254,777 12,278 840 20,675 3,293 2,150 294,013 96,023
Provided for income and production taxes Exploration and research written off Minority interest in profits of subsidiaries Provision for loss of Northwood Pulp Limited (Note 2(b))	33,975 5,700 1,055 2,693 43,423	34,627 5,151 374 6,324 46,476
Net earnings for the year	\$ 52,476	\$ 49,547
Earnings per share—after sub-division (Note 4(a))	\$2.20	\$2.07
CONSOLIDATED STATEMENT OF RETAINED EARNINGS		
Balance—beginning of year: As previously reported Adjustment resulting from consolidation of three subsidiaries not pre-	\$197,964	\$169,780
viously included (Note 1(a))	42,401	37,780
As restated Net earnings for the year Gain on sale of major investments	240,365 52,476	207,560 49,547 26,966
	292,841	284,073
Dividends paid Excess of cost of investments in consolidated subsidiaries over book value	24,478	22,081
of net assets acquired	1,239	21,627
	25,717	43,708
Balance—end of year	\$267,124	\$240,365
(See accompanying notes)		

CONSOLIDATED STATEMENT OF SOURCE	1968	1967
AND APPLICATION OF FUNDS FOR THE YEAR ENDED DECEMBER 31, 1968 (with comparative figures for the year 1967)		
	(in th	ousands)
Working Capital, beginning of year	\$107,894	\$ 97,981
Source of Funds:		
Operations—		
Net earnings for the year	52,476	49,547
Depreciation and preproduction charges		13,118
Deferred income taxes		8,130
	73,634	70,795
Issue of shares	210	288
Fixed asset disposals and adjustments		298
Increase in deferred liabilities and holdbacks payable		1,873
Long-term debt (net after discount)	135,491	63,461
Gain on sale of major investments		26,966
Other (net)	1,594	(249)
	216,380	163,432
Application of Funds:		
Dividends	24,478	22,082
Fixed assets and projects under construction		44,360
Deferred preproduction and exploration expenditures		2,523
Investments and advances (net)		59,483
Minority interest		2,042
Non-current assets (net) of acquired subsidiaries		23,029
Funds held by Trustee for Aluminum Project		
	190,644	153,519
Net Increase	25,736	9,913
Working Capital, end of year	\$133,630	\$107,894
(See accompanying notes)		

CONSOLIDATED BALANCE SHEET—DECEMBER 31, 1968 (with comparative figures at December 31, 1967)	1968	1967
ASSETS	(in tho	usands)
Current Assets:		
Cash and short-term notes	\$ 52,007	\$ 19,699
value \$40,596,000)	23,536	25,489
Accounts, advances and tolls receivable (\$704,000 due from unconsolidated subsidiaries)	78,911	76,412
Inventories of metals, products and stores—metals at estimated realiz-		
able value, other inventories at the lower of cost or market	105,439	114,526
	259,893	236,126
Investments and Advances, at cost less amounts written off:		
Unconsolidated subsidiaries (Note 1(b))	62,635	65,404
Associated and other companies (Note 2(b))	107,775	82,272
	_170,410	147,676
Fixed Assets:		
Mining properties, at cost	3,211	3,208
Land, buildings and equipment, at cost	288,970	280,666
Accumulated depreciation	167,548	163,541
	121,422	117,125
Projects under construction (Potash \$69,241,000, Aluminum \$4,535,000)	73,776	38.549
Funds held by Trustee for Aluminum Project (Note 3(b))	84,228	
	282,637	158,882
Other:		
Preproduction (\$6,280,000), exploration (\$3,008,000) and other expenditures deferred	16,345	16,658
Revenue bonds and debenture discount and financing expenses, at cost less amortization	3,182	
	19,527	16,658
(See accompanying notes)	\$732,467	\$559,342

1968 1967

LIABILITIES	(in thousands)	
Current Liabilities:		
Bank advances	\$ 18,615	\$ 14,639
Accounts payable (\$6,145,000 due to unconsolidated subsidiaries)	97,531	92,997
Taxes payable	8,621	14,394
Current portion of long-term debt	1,496	6,202
	_126,263	128,232
Deferred Liabilities and Holdbacks Payable	7,258	3,191
Deferred Income Taxes	30,632	25,001
Long-term Debt (Note 3)	223,662	84,989
Minority Interests in Consolidated Subsidiaries	5,410	5,656
Shareholders' Equity:		
Capital stock (Note 4)—		
Authorized: 40,000,000 shares of no par value Issued: 23,888,090 shares	67,075	66,865
Contributed surplus	5,043	5,043
Retained earnings	267,124	240,365
	339,242	312,273
On behalf of the Board:		
JOHN R. BRADFIELD, Director		
ALFRED POWIS, Director		
(See accompanying notes)	\$732,467	\$559,342

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 1968

1. Basis of statement presentation and foreign exchange translation

- (a) The accompanying consolidated financial statements include the accounts of Noranda Mines Limited (the "Company") and all of its subsidiaries except:
 - (i) Brunswick Mining and Smelting Corporation Limited, which is referred to in Note 2(a), and
 - (ii) A number of foreign operating companies and non-operating investment companies, the earnings and assets of which are not significant in relation to the consolidated financial position.

The assets and liabilities and results of operations of three previously unconsolidated subsidiaries; Gaspé Copper Mines, Limited, Aunor Gold Mines Limited, and Hallnor Mines, Limited have been included in the accompanying consolidated financial statements. The inclusion of these three subsidiaries for the first time results in the addition of \$37,780,000 to consolidated retained earnings as of January 1, 1967.

The consolidated accounts for 1967 have been re-

stated for comparative purposes.

(b) The Company's share of the aggregate profits less losses of its unconsolidated subsidiaries for their 1968 fiscal periods amounted to \$1,234,000 compared with dividends of \$207,000 received from such subsidiaries and included in the consolidated statement of earnings for the year. The Company's share of the accumulated undistributed profits less losses of its unconsolidated subsidiaries of \$2,049,000 has not been taken up in the consolidated accounts.

(c) Assets and liabilities of United States subsidiaries have been translated into Canadian dollars at current rates of exchange except that fixed assets and long-term debt have been translated at the rates prevailing at the dates on which the assets were acquired or the

debt incurred.

2. Investments

(a) The Company and its consolidated subsidiaries hold \$49,500,000 principal amount of $6\frac{1}{2}\%$ First Mortgage Convertible Income Bonds maturing April 30, 1977, 100,000 $6\frac{1}{2}\%$ Cumulative Convertible Redeemable Preferred Shares with a par value of \$5 each, and a minor holding of common shares of Brunswick Mining and Smelting Corporation Limited.

Because of the voting rights attaching to the preferred shares, Brunswick is technically a subsidiary of the Company under the definitions set out in The Corporations Act (Ontario), but because the Company holds less than 1/10 of 1% of its outstanding common shares the accounts of Brunswick have not been consolidated. Although Brunswick has had substantial losses to date on a consolidated basis, because of the Company's minor holding of common

shares its share of such losses is not significant and has not been provided for.

(b) The investments in and advances to "Associated and other companies" are not temporary investments and include shares carried at a book value of \$57,916,000 which had a quoted market value of \$198,529,000 at December 31, 1968. The latter amounts do not necessarily represent the value of these holdings which may be more or less than that indicated by market quotations. The investments in and advances to "Associated and other companies" also include a 50% interest in Northwood Pulp Limited, the carrying value of which was reduced by \$6,324,000 at December 31, 1967 and a further \$2,693,000 at December 31, 1968, representing provisions for the Company's share of losses incurred to such dates.

(c) The unconsolidated subsidiaries hold 96,000 shares of the Company.

3

. Long-term debt	December 31, 1968	December 31, 1967	
 (a) Long-term bank loans to Noranda and consolidated subsidiaries — 5% bank loan (December 31, 1968—\$1,400,000 U.S.; December 31, 1967 			
-\$2,100,000 U.S.) repayable in equal quarterly instalments 1969-1972	\$ 1,512,000 50,000,000	\$ 2,268,000 50,000,000	
January 31, 1971**	10,908,000	10,908,000	
U.S.) due September 15, 1972*	6,264,000	6,264,000	
due May 8, 1973*	16,200,000 84,884,000	69,440,000	
Long-term debt— Noranda Mines Limited 7½% sinking fund debentures due October 1, 1988	30,000,000		
Canada Wire and Cable Company Limited 5%% sinking fund debentures matu- ring June 1, 1983 (less purchased for sinking fund requirements \$1,000,000)	3,750,000	3,750,000	
Noranda Aluminum, Inc. 4.80% to 5.90% industrial revenue bonds, maturing November 1, 1972 to 1978 and 1993 (\$85,000,000 U.S.) (note 3(b))	91,163,000		
The Pacific Coast Company 5½%—7½% mortgage notes payable in monthly instalments to 1987 (December 31, 1968—\$11,631,000 U.S.; December 31, 1967—			
\$9,753,000 U.S.)	12,893,000	10,533,000	
Sundry indebtedness	972,000	1,266,000	
	138,778,000	15,549,000	
	\$223,662,000	\$ 84,989,000	

^{*}These bank loans bear interest at rates which vary from time to time.

^{**}An agreement relating to this debt contains various restrictions on the Company and its subsidiaries in connection with the maintenance of working capital and tangible net worth, and the relationship of the latter to consolidated liabilities.

(b) Noranda Aluminum, Inc., a subsidiary, has agreed to lease an aluminum reduction plant which is being constructed by the City of New Madrid, Missouri. Funds to defray the costs of the project were provided on December 30, 1968 by an issue of industrial revenue bonds of the City in the principal amount of \$85,000,000 U.S. which are payable from and secured by a pledge of revenue derived from the project, including amounts to be received by the City under lease. Payment of amounts due under the lease which will be sufficient to amortize the bonds over a 25 year term is unconditionally guaranteed by the Company. At the end of the period, Noranda Aluminum, Inc. will have an option to purchase the plant for a nominal sum. Because the lease provisions indicate that it is in substance a purchase, this transaction is being treated for accounting purposes on an ownership basis. Accordingly, the liability for the principal amount of bonds is shown with long-term debt and the unexpended proceeds of their sale held by the Trustee are grouped with fixed assets, pending expenditure for the facilities.

4. Capital stock

(a) Supplementary letters patent were obtained on December 14, 1968 splitting the authorized and issued capital on a two for one basis and increasing the authorized capital to 40,000,000 shares by the creation of an additional 10,000,000 shares.

(b) Stock option plan:

Under the provisions of the stock option plan, options on 56,500 shares were granted during the year and options on 8,992 shares were exercised for \$210,000 cash. At December 31, 1968, options on 108,550 shares were outstanding under this plan.

5. Commitments and contingent liabilities

(a) Approved capital projects and financing commitments outstanding (excluding the aluminum project referred to in note 3(b)) total approximately \$63,000,000 at December 31, 1968. In addition, the Company has guaranteed repayment of bank loans of Northwood Pulp Limited, to the extent of approximately \$22,600,000 U.S. at December 31, 1968.

(b) The estimated future cost of funding past service pension obligations is \$2,800,000 which will be funded and absorbed against income over 22 years.

(c) Subsidiary companies are committed to annual rentals aggregating \$757,000 under long-term plant leases of nineteen to twenty-three years.

6. Remuneration of Directors and Senior Officers

The aggregate direct remuneration paid or payable by Noranda and its consolidated subsidiaries to directors and senior officers amounted to \$693,849. Remuneration paid by unconsolidated subsidiaries to such persons was \$2,250.

7. Subsequent events

As noted in the Directors' Report subsequent to the year-end, the Company made a major acquisition of shares of British Columbia Forest Products Limited for cash and shares of Noranda.

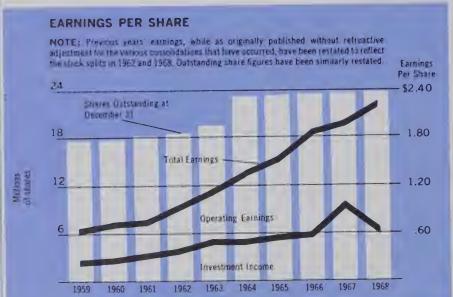
AUDITORS' REPORT

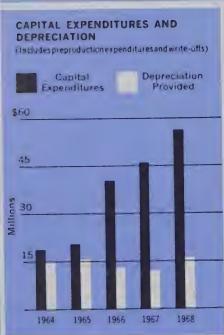
To the Shareholders of Noranda Mines Limited:

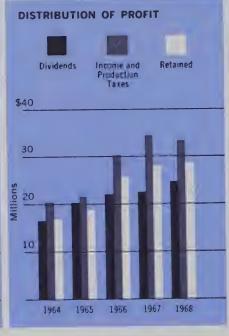
We have examined the consolidated balance sheet of Noranda Mines Limited and its consolidated subsidiaries as at December 31, 1968, and the consolidated statements of earnings, retained earnings and source and application of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

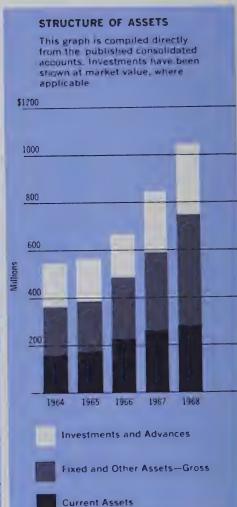
In our opinion these financial statements present fairly the financial position of the companies as at December 31, 1968 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year, after giving retroactive effect to the change in basis of consolidation as explained in note 1 (a).

CLARKSON, GORDON & CO., Toronto, Canada, Chartered Accountants February 18, 1969.









RESULTS OF PRINCIPAL UNCONSOLIDATED SUBSIDIARY AND ASSOCIATED MINING COMPANIES (Dollars in thousands)

	BRUNSWICK MINING AND SMELTING	EMPRESA FLUORSPAR MINES (U.S.Currency)	EMPRESA MINERA de EL SETENTRION (U.S.Currency)	KERR ADDISON MINES	ORCHAN MINES	PAMOUR PORCUPINE MINES
	1968 1967	1968 1967	<u>1968</u> <u>1967</u>	<u>1968</u> <u>1967</u>	<u>1968</u> <u>1967</u>	1968 1967
Revenues	\$ 37,111 \$25,098	\$3,854 \$2,020	\$2,493 \$2,431	\$26,947 \$25,486	\$11,311 \$11,678	\$3,154 \$2,784
Expenses	31,427 <u>25,215</u> 5,684 (117)	1,845 1,159 2,009 861	1,838 1,845 655 586	16,167 (2) 15,704 10,780 9,782	5,276 5,337 6,035 6,341	2,342 ⁽²⁾ 2,288 812 496
Depreciation and Write-offs	10,248 9,211	56 109	90 77	1,790 1,398	3,106 2,589	51 53
Income and Production Taxes	132 234 10,380 9,445	835 205 891 314	224 202 314 279	2,222 2,070 4,012 3,468	230 400 3,336 2,989	25 <u>1</u> 76 54
Net Profit (Loss)	<u>\$(4,696)</u> <u>\$(9,562)</u>	\$1,118 \$ 547	\$ 341 \$ 307	\$ 6,768 \$ 6,314	\$ 2,699 \$ 3,352	\$ 736 \$ 442
Dividends	\$ _ \$ _	\$ 25(1) \$ 37	\$ 300 \$ 600	\$ 5,286 \$ 5,714	\$ 909 \$ —	\$ 500 \$ 500
Working Capital Noranda's Interest:	\$(13,626) \$(13,746) Note(3)	\$2,971 \$2,405	\$1,802 \$1,235	\$20,744 \$24,757	\$ 4,138 \$ 383	\$ 812 \$ 500
Direct*		75%	61%	38%	45%	46%
Beneficial (4)		90%	61%	43%	50%	46%
Direct Interest In: Net Profit		\$ 839	\$ 208	\$ 2,572	\$ 1,215	\$ 339
Dividends		\$ 19	\$ 183	\$ 2,009	\$ 409	\$ 230
Shareholders' Equity		\$2,613	\$3,116	\$23,121	\$ 7,309	\$2,690
1968 Dividends Received Per Noranda Share		_	\$ 0.01	\$ 0.07	\$ 0.02	\$ 0.01

Notes: (1) On preferred shares

(2) Net of Emergency Gold Mining Assistance

(3) Investment in common shares is nominal

(4) Effective interest through direct and indirect investment in common shares.

Noranda's interest, both direct and beneficial (Note 4), in the undistributed 1968 earnings of the above companies together with Placer, Mattagami and Craigmont was \$0.09 per share.

MAJOR INTERESTS BRYNNOR CANADIAN COPPER REFINERS GASPÉ COPPER QUEBEC IRON FOUNDRIES NORANDA COPPER MILLS BRUNSWICK MINING & SMELTING (1) GRANDVIEW INDUSTRIES NORANDA MINES CHILE CANADA WIRE & CABLE EMPRESA FLUORSPAR PACIFIC COAST SETENTRION COULTER MANUFACTURING AUNOR NORTHWOOD MILLS HALLNOR NORANDA SALES PAINCIPAL OPERATING SUBSIDIARIES BELLEDUNE FERTILIZER WIRE ROPE INDUSTRIES BRENDA (2) CANADIAN NORTHWOOD PULP ZINC PAMOUR **B.C. FOREST PRODUCTS** ORCHAN KERR ST. LAWRENCE FERTILIZERS JOUTEL AGNEW LAKE GENERAL SMELTING PRINCIPAL ASSOCIATED COMPANIES OTHER IMPORTANT INTERESTS MATTAGAMI PLACER CRAIGMONT Where applicable the size of each circle indicates the total market value of shares outstanding. HELD BY NORANDA OR WHOLLY OWNED SUBSIDIARIES (1) Convertible securities (2) Includes shares to be issued under financing agreements. NORANDA'S INDIRECT BENEFICIAL INTEREST



